

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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| In the Matter of |) | |
| |) | |
| Use of Spectrum Bands Above 24 GHz For |) | GN Docket No. 14-177 |
| Mobile Radio Services |) | |

REPLY COMMENTS OF VERIZON

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I. INTRODUCTION AND SUMMARY.

The comments submitted in response to the *Fourth Further Notice of Proposed Rulemaking*¹ uniformly support the FCC’s overarching goal: to reduce encumbrances and create more contiguous swathes of spectrum holdings in the 39 GHz band and enable a robust auction for flexible-use services including 5G services. Nearly all commenters support reducing the license block size from 200 megahertz to 100 megahertz – a critical first step to more efficiently achieving this goal – and they generally support the proposed voucher exchange and incentive auction.

In these reply comments, we offer targeted views in response to specific issues raised in various initial comments. Among other things, the FCC should:

- Modify the 39 GHz band plan (and the Upper 37 GHz and 47 GHz band plans as well) from 200 megahertz channels to 100 megahertz channels to better accommodate the repacking of incumbents and promote efficient spectrum use;

¹ *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Fourth Further Notice of Proposed Rulemaking, GN Docket No. 14-177, FCC 18-110 (rel. Aug. 3, 2018) (“*Fourth FNPRM*”).

- Reject the suggestion to do away with the pre-auction voucher exchange, a key step to ensuring robust participation in a fair auction while reducing encumbrances in the 39 GHz band;
- Craft rules for the pre-auction voucher exchange that encourage incumbent 39 GHz licensees to participate;
- Allow 39 GHz incumbents to use their vouchers to pay winning bids for licenses in any of the auctioned bands; and
- Confirm that the FCC will relocate non-participating 39 GHz incumbent licensees to the less desirable top end of the 39 GHz band.

By taking these actions and adopting the modifications we offered in our initial comments, the FCC can rationalize the 39 GHz band and foster a robust auction process to encourage rapid deployment of 5G and other advanced wireless services in the millimeter wave bands.

II. THE RECORD SUPPORTS A MODIFIED 100 MEGAHERTZ CHANNEL BAND PLAN.

All commenters but one support the FCC’s proposal to reduce the block size in the 39 GHz band (and in the Upper 37 GHz and 47 GHz bands as well) from 200 megahertz to 100 megahertz channels and thereby simplify spectrum management in the millimeter wave bands, maximize efficient spectrum use, and facilitate the reconfiguration of the 39 MHz band.²

The lone outlier is the Telecommunications Industry Association (“TIA”), which calls for the use of 200 megahertz spectrum blocks across the millimeter wave bands generally to avoid

² See, e.g., Comments of AT&T Services, Inc., GN Docket No. 14-177, at 2-3 (Sept. 17, 2018) (“AT&T Comments”); Comments of Competitive Carriers Association, GN Docket No. 14-177, at 3-4 (Sept. 17, 2018) (“CCA Comments”); Comments of Ericsson, GN Docket No. 14-177, at 5-6 (Sept. 17, 2018); Comments of T-Mobile, GN Docket No. 14-177, at 2-4 (Sept. 17, 2018) (“T-Mobile Comments”).

“fragmented spectrum.”³ But for the 39 GHz band in particular, use of 100 megahertz channels will simplify the realignment process, as incumbent licensees generally hold non-contiguous paired 50 megahertz blocks. As T-Mobile observed, for example, licensing the 39 GHz band in 100 megahertz channels “will facilitate current licensees acquiring new licenses in the auction for contiguous 100 megahertz channel blocks – the same amount of spectrum they hold today but configured consistently with the new 39 GHz band plan – without spending additional funds.”⁴ Any other channelization could force incumbents to make payments in the auction to retain their spectrum positions.

More broadly, use of 100 megahertz channels will provide consistency across the millimeter wave bands, and in any event bidders that desire greater spectrum scale are permitted to aggregate multiple 100 megahertz blocks to create holdings of 200 megahertz or more.⁵ The FCC thus should modify the band plans to 100 megahertz-wide channels.

III. THE PRE-AUCTION VOUCHER EXCHANGE, WITH SMALL MODIFICATIONS, WILL FACILITATE THE SUCCESS OF THE INCENTIVE AUCTION.

The pre-auction voucher exchange will be a critical element of a successful auction because it is likely to significantly reduce the number of encumbered, or fractionalized, licenses. Below we respond to pre-auction voucher exchange comments in the record.

The Pre-Auction Voucher Exchange is a Necessary Component to the Realignment Process. The Commission should reject the suggestion by T-Mobile to do away with the

³ Comments of Telecommunications Industry Association, GN Docket No. 14-177, at 3-5 (Sept. 17, 2018).

⁴ T-Mobile Comments at 3.

⁵ *Fourth FNPRM* ¶¶ 10, 12.

proposed pre-auction voucher exchange, a key aspect of the realignment process.⁶ Today, there are hundreds of encumbered licenses in the 39 GHz band – Rectangular Service Area (“RSA”) licenses that do not conform to Partial Economic Areas (“PEAs”) and PEA licenses and channel blocks that overlap and must protect those RSA licenses. The pre-auction voucher exchange will create further incentives to encourage participation in the incentive auction by allowing incumbents with encumbered licenses to “exit the auction with a whole number of new licenses without having to make net payments to secure their spectrum holdings.”⁷ T-Mobile’s proposal would undermine this key tool for rationalizing the 39 GHz band. The pre-auction voucher exchange process will result in far fewer fractional vouchers at the start of the auction.

T-Mobile’s single justification is wanting: eliminating the pre-auction voucher program “may help expedite the adoption of rules ... by removing the need to create regulations for the pre-auction voucher exchange process.”⁸ In reality, T-Mobile’s suggestion would leave its competitors – incumbent licensees holding large numbers of encumbered PEA licenses and RSA licenses –without a process to convert their fractional interests into full PEA licenses through the incentive auction process. The FCC should adopt the pre-auction voucher program with a simple, one time, automated and aggregate process that can be completed quickly and far enough in advance of the auction to allow participants adequate time to plan. In so doing, the Commission will promote incumbent participation in the incentive auction and advance the overarching goal of promoting a rationalized 39 GHz band for auction.

⁶ See T-Mobile Comments at 7.

⁷ *Fourth FNPRM* ¶ 31.

⁸ T-Mobile Comments at 7.

If a Voucher is Ultimately Not Redeemed, It Will Revert to a License. Verizon agrees with T-Mobile that the FCC should require incumbent licensees that participate in the pre-auction voucher exchange to “exchange all of their licenses in the band for the right to participate in the auction and receive vouchers.”⁹ That is, the FCC should require that incumbents wishing to participate in the pre-auction voucher exchange be “all in.” But, as Verizon observed in its initial comments, the FCC should also make clear that if a shortfall in overall aggregate auction demand causes a whole voucher obtained in the pre-auction voucher exchange to go unredeemed, the voucher holder would receive a license in the PEA. By clarifying this “backstop,” the Commission will eliminate uncertainty that could suppress incumbent participation in the voucher exchange.¹⁰

The FCC Should Not Impose a “Nearest Integer” Limit on Voucher Exchanges.

Eliminating the nearest integer proposal from the pre-auction voucher exchange will allow incumbents to rationalize their holdings in a fair and reasonable manner, contrary to conclusory concerns expressed by AT&T and T-Mobile about “gaming”¹¹ or “arbitrage.”¹² In particular, the nearest integer proposal is unnecessary because the pre-auction voucher exchange design contemplates an FCC-determined, value-weighted exchange rate that will ensure against unfair results from the exchange. There is thus no reason to deny incumbents the ability to realign their holdings among different PEAs in the most efficient and effective means possible, including

⁹ *Id.* at 8.

¹⁰ Alternatively, in the unlikely circumstance that auction proceeds are insufficient to cover all vouchers, Verizon would support the adoption of a mechanism under which the auction would close, with the FCC recalculating the amounts for voucher incentive payments to ensure that they do not exceed auction proceeds. *See id.* at 15.

¹¹ *See* AT&T Comments at 7

¹² T-Mobile Comments at 10.

where doing so would increase or decrease their voucher holdings in a particular PEA by more than one full voucher.

To ensure the pre-auction voucher exchange produces a reasonable outcome, the FCC could limit incumbents from acquiring more full PEA vouchers in a PEA than the largest number of 100 megahertz licenses it holds in any PEA. For example, under this proposal, an incumbent licensee that holds encumbered PEA licenses and/or RSA licenses, and also holds at most four paired 50 megahertz full PEA licenses in any single PEA, could not exchange its encumbered PEA/RSA licenses for more than four full PEA vouchers in any PEA. It would be permitted, however, to exchange five partial licenses valued at 0.4 for two full vouchers in an equivalently valued PEA in which it already holds two full vouchers, bringing its total number of full vouchers to four.

Separately, AT&T suggests that the FCC could restrict “trading up” to only the largest fractional voucher holders if there is concern that too many vouchers could be created in a PEA.¹³ It is not clear that such a concern would arise given the large number of Upper 37 GHz blocks to be included in the incentive auction, but in any event, there is no basis to adopt preferential treatment for some incumbents over others.

The FCC Should Allow “Non-Whole Block” Exchanges in More than One PEA. We support AT&T’s proposal to allow incumbents to exchange initial voucher positions for non-whole block amounts in more than one PEA as part of the pre-auction voucher exchange, thereby providing additional flexibility for incumbents to rationalize their spectrum holdings.¹⁴ But this clarification should not prohibit an incumbent from accumulating a fractional (or whole) voucher

¹³ See AT&T Comments at 7-8.

¹⁴ See *id.* at 8.

in a PEA where it initially had no partial license interest. The objective of the pre-auction voucher exchange and incentive auction is to permit incumbent licensees to rationalize their spectrum holdings. Because geographic coverage is an important element of a spectrum plan, imposing such a restriction would cut against that objective.

The pre-auction voucher examples included in paragraph 34 of the *Fourth FNPRM*¹⁵ also could be construed as requiring each incumbent to engage in a difficult and inefficient manual matching process. A more automated process that permits (but does not require) exchanges resulting in non-whole blocks in more than one PEA would more effectively achieve the desired outcome for both the FCC and incumbents.

The Pre-Auction Voucher Exchange Will Not “Drive Prices Up.” The Competitive Carriers Association (“CCA”) claims, without any support, that incumbents with vouchers “may drive prices up during the bidding to increase the value of their vouchers.”¹⁶ As we pointed out in our initial comments, this concern is unfounded: with so many generic blocks available in the 39 GHz and Upper 37 GHz bands, the ability of one incumbent to affect auction price is small and it would be difficult and risky for any incumbent to seek to drive up prices by insincere bidding.¹⁷ As T-Mobile observes, “[t]he risk of being left as an ‘accidental winner’ in the auction outweighs the benefit available to an incumbent” and, in any event, “[i]ncumbents with large holdings are likely to be net-buyers in the auction with no real incentive to take this risk.”¹⁸

¹⁵ See *Fourth NPRM* ¶ 34, nn. 45 & 46.

¹⁶ CCA Comments at 5.

¹⁷ See Comments of Verizon, GN Docket No. 14-177, at 6-7 (Sept. 17, 2018).

¹⁸ T-Mobile Comments at 13.

The FCC Should Adopt a Broad-Based Benchmark for Pricing in the Pre-Auction

Voucher Exchange. Verizon agrees with T-Mobile’s suggestion that the FCC should “align the pre-auction voucher exchange rates as closely as possible with the ultimate auction prices,” but the FCC should not rely only on the results of a single auction, Auction 102 – the upcoming auction of 24 GHz spectrum.¹⁹ The upcoming auction of 24 GHz spectrum will be unique, and its timing would not allow for proper planning for this auction. The FCC instead should base its voucher pricing model on recently-completed auctions with similar market geographies, such as the 600 MHz forward auction.

IV. INCUMBENT PARTICIPANTS IN THE INCENTIVE AUCTION SHOULD BE ALLOWED TO CREDIT THEIR VOUCHERS AGAINST WINNING BIDS IN THE 39 GHz, UPPER 37 GHz, AND 47 GHz BANDS.

Verizon agrees with T-Mobile that “incumbent vouchers [should] be exchangeable throughout the 37 and 39 GHz bans (and any other bands, including 47 GHz, which are included in a simultaneously-conducted auction)”²⁰ In contrast, CCA claims, without technical support, that cross-band use of vouchers risks some sort of “interference.” In fact, allowing cross-band voucher use will facilitate the rationalization of spectrum holdings, which serves to reduce interference.

¹⁹ *Id.* at 9.

²⁰ *Id.* at 11 (referencing the Commission’s proposal that “[t]he amount of the incentive payment could be used as a credit toward the licensees’ winning bids for any new licenses in any of the bands offered in the auction.” *Fourth FNPRM* ¶ 16).

V. THE COMMISSION’S REPACKING PROPOSAL TO THE UPPER END OF THE 39 GHz BAND IS REASONABLE.

Verizon supports relocating incumbent licensees that do not participate in the incentive auction to the top end of the 39 GHz band.²¹ Doing so will allow for the maximum amount of contiguous, cleared spectrum in the remainder of the 39 GHz band and the entire Upper 37 GHz band in the incentive auction. This is, of course, the goal of the proceeding: to afford maximum opportunities for competitive access to wide swathes of spectrum for 5G services. The Commission should clarify, however, that placement at the top end of the 39 GHz band would be less advantageous than placement in lower portions of the band because (1) the propagation characteristics at the top end of the band are inferior, and (2) coexistence with adjacent government satellite operations in the 40 GHz band may be an issue in the future. This clarification is a matter of common sense, and would help the Internal Revenue Service assess any tax consequences of this entire process.

The Commission should reject the plea from Diversified Communications, Inc. (“DCI”), a holder of a secondary local television transmission service (“LTTS”) license, that it be compensated for any equipment costs incurred as a result of new licensing in the 39 GHz band. As a secondary licensee, DCI is obligated to step aside when its use would interfere with a primary licensed use, and it has no “right” to be compensated for any costs incurred because of the advent of primary licensed services in the band.²² And unlike the secondary low power

²¹ See James Bono & Allan Ingraham, *An Auction Design for Millimeter Wave Spectrum* at 5-6 (Nov. 30, 2017), attached to letter from Alex Starr, AT&T, to Marlene Dortch, FCC, GN Docket No. 14-177 (Dec. 12 2017).

²² See Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6402, 126 Stat. 156, 224-25 (codified at 47 U.S.C. § 309(j)(8)(G)(i)) (providing an incentive payment only to a licensee that “relinquish[es] voluntarily some or all of its licensed spectrum usage rights in order to permit the assignment of new initial licenses”).

television licensees in the 600 MHz band, for whom Congress specifically authorized reimbursements for relocation costs incurred in the wake of the broadcast spectrum incentive auction, LTTS licensees are entitled to no such benefit. In addition, DCI's license, WPJC398, authorizes operations on multiple frequency bands, and as a secondary licensee, DCI made any investments in 39 GHz equipment with full knowledge that it would need to step aside to accommodate any new primary licensed use.

VI. CONCLUSION

The comments in this proceeding support the Commission's proposed auction to reconfigure the 39 GHz band and afford incumbent 39 GHz licensee the opportunity to rationalize their spectrum holdings. To foster the rapid deployment of 5G and other next-generation services in these millimeter wave bands, the Commission should move ahead quickly to adopt rules along the lines suggested herein and in our initial comments.

Respectfully submitted,

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